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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,479	08/28/2003	Martin R. Elliott	7096/SYNX/JB	6122

41161 7590 04/13/2007  
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EXAMINER

LOWE, MICHAEL S

ART UNIT PAPER NUMBER

3652

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/650,479	Applicant(s) ELLIOTT ET AL.	
	Examiner M. Scott Lowe	Art Unit 3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11/2/06 & 2/2/07.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 8-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____                                                |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/24/06 &amp; 11/3/06</u>                                                 | 6) <input type="checkbox"/> Other: _____                                    |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/2/06 has been entered.

***Election/Restrictions***

Applicant's election without traverse of invention I (claims 1-7, 19-20) in the reply filed on 2/2/07 is acknowledged.

Claims 8-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2/2/07.

***Information Disclosure Statement***

Reference 6,042,324 on page 3 of the IDS filed 5/24/06 is a duplicate reference already listed on page 1 and is lined through on page 3.

References 2004/0082546 & 2004/0076596 of the IDS filed 11/3/06 do not appear related to the field of the invention and are lined through.

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The cited references were reviewed as filed. If any of the U.S. or foreign references has a particular bearing on the invention, applicant should submit a concise explanation of the reference's relevance.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-7, 19-20 are provisionally rejected on the ground of nonstatutory double patenting over claims 1-90 of copending Application No. 10/650,480 and also over claims 1-34 of copending Application No. 10/650,310. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that

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compending application since the referenced compending application and the instant application are claiming common subject matter, including a plurality of load ports, a carrier handler disengaging a carrier while it is in motion on a transport device.

It is well settled that the omission of an element, and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ 184 (CCPA 1963). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969). Omission of a reference element or step whose function is not needed would be obvious to one of ordinary skill in the art.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other compending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,5,6,19-20 are rejected under 35 U.S.C. 103(a) as obvious over Garric (US 5,382,127) in view of Rochet (US 4,805,759).

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Re claims 1,19 Garric teaches a method of supplying substrates 138 to a processing tool (503,etc.), comprising:

providing a plurality of load ports 200 (closest number) each having a mechanism adapted to open a substrate carrier 100;

providing a factory exchange location 401A,B,C (closest numbers) at which substrate carriers 100 are exchanged with a substrate carrier transport device 401 while the substrate carriers 100 are in motion and being transported by the substrate carrier transport device 401;

providing a carrier handler (not numbered, column 36, lines 54+) having an end effector (not numbered) adapted to contact a substrate carrier 100 and disengage the substrate carrier 100 from the substrate carrier transport device 401 while the substrate carrier 100 is in motion and being transported by the substrate carrier transport device;

receiving a first plurality of substrate carriers 100 at the factory exchange location from the substrate carrier transport device 401; and

for each the first plurality substrate carriers:

transporting the substrate carrier 100 from the factory exchange location directly to a respective one of the plurality of load ports;

docking and opening the substrate carrier at the respective load port;

undocking and closing the substrate carrier at the respective load port;

transporting the substrate carrier 100 from the respective load port directly to the factory exchange location; and

returning the substrate carrier to the substrate carrier transport device while the substrate carriers transport device is in motion.

Garric (column 22) infers but does not explicitly state that the carrier handler end effector disengages the substrate carrier 100 from the substrate carrier transport device 401 while the substrate carrier 100 is in motion and being transported by the substrate carrier transport device and the substrate carrier transport device is in motion when the carrier 100 is returned to it. For sake of completeness the following obvious rejection is provided:

Rochet teaches a carrier handler end effector 44 disengages the substrate carrier 36 from the substrate carrier transport device 14 while the substrate carrier 36 is in motion and being transported by the substrate carrier transport device and the substrate carrier transport device is in motion when the carrier 36 is returned to it in order to increase throughput and decrease friction pollution by avoiding unnecessary stopping and starting. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Garric by the general teaching of Rochet to have the carrier handler end effector disengages the substrate carrier from the substrate carrier transport device while the substrate carrier is in motion and being transported by the substrate carrier transport device and the substrate carrier transport device is in motion when the carrier is returned to it in order to increase throughput and decrease friction pollution by avoiding unnecessary stopping and starting.

Re claims 2, Garric teaches the substrate carriers 100 are single substrate carriers.

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Re claims 5, Garric teaches the docking of each substrate carrier 100 occurs simultaneously with opening of the respective substrate carrier.

Re claims 6, Garric teaches the factory exchange location and the load ports have substantially the same footprint.

Re claim 20, Garric teaches an apparatus adapted to supply substrates to a processing tool (503,etc.), comprising:

a substrate carrier handler (401 or unnumbered, column 36, lines 54+) adapted to transport a substrate carrier 100 to a first load port 200 (closest number) of the processing tool, the substrate carrier handler including:

a vertical guide (the base, floor, etc.);

a horizontal guide (the base, floor, etc.) coupled to the vertical guide; and

an end effector (not numbered) adapted to support the substrate carrier 100 and to move vertically relative to the vertical guide and horizontally relative to the horizontal guide; and

transporting the substrate carrier from the substrate carrier conveyor directly to the first load port;

docking and opening the substrate carrier at the first load port;

undocking and closing the substrate carrier at the first load port; and returning the substrate carrier directly to the substrate carrier conveyor.

Garric (column 22) infers but does not explicitly state that the carrier handler end effector disengages the substrate carrier 100 from the substrate carrier transport device 401 while the substrate carrier 100 is in motion and being transported by the substrate



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carrier transport device and the substrate carrier transport device is in motion when the carrier 100 is returned to it. For sake of completeness the following obvious rejection is provided:

Rochet teaches a carrier handler end effector 44 disengages the substrate carrier 36 from the substrate carrier transport device 14 while the substrate carrier 36 is in motion and being transported by the substrate carrier transport device and the substrate carrier transport device is in motion when the carrier 36 is returned to it in order to increase throughput and decrease friction pollution by avoiding unnecessary stopping and starting. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Garric by the general teaching of Rochet to have the carrier handler end effector disengages the substrate carrier from the substrate carrier transport device while the substrate carrier is in motion and being transported by the substrate carrier transport device and the substrate carrier transport device is in motion when the carrier is returned to it in order to increase throughput and decrease friction pollution by avoiding unnecessary stopping and starting.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garric (US 5,382,127) in view of Rochet (US 4,805,759), and further in view of Matsumoto (US 6,517,304).

Re claim 3, Garric teaches groups of two load ports, but does not teach stacking the load ports. Matsumoto teaches stacking load ports 31. It would have been obvious

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to one of ordinary skill in the art at the time the invention was made to have modified Garric by the general teaching of Matsumoto to stack load ports in order to save space.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garric (US 5,382,127) in view of Rochet (US 4,805,759) and Matsumoto (US 6,517,304), and further in view of Asakawa (JP 10256346).

Re claim 4, Garric teaches (not numbered, column 36, lines 54+) that the carrier handler may be any type of device (and thus type of movement). Asakawa teaches placing a carrier handler 14,15 between load ports and in order to reduce footprint and increase efficiency (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Garric by the general teaching of Asakawa to have the carrier handler move the substrate carriers only within an envelope defined by footprints of the two stacks of load ports in order to promote efficiency and reduce the footprint.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garric (US 5,382,127) in view of Rochet (US 4,805,759) and further in view of Kimura (US 6,439,822).

Re claim 7, Garric does not teach the factory exchange location is at a height greater than respective heights of all of the load ports. Kimura teaches that having the substrate carrier transport device 51 at a height greater than respective heights of all of the load ports creates a more efficient layout saving space and money (column 8, lines

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2-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Garric by the general teaching of Kimura to have the substrate carrier transport device 401 (and thus the factory exchange location) at a height greater than respective heights of all of the load ports creates a more efficient layout saving space and money.

### ***Conclusion***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Scott Lowe whose telephone number is (571) 272-6929. The examiner can normally be reached on 6:30am-4:30pm M-W; Th work offsite.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571)272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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